ORIGINAL

OPEN MEETING

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MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: December 21, 2012

RE: RESOURCE PLANNING AND PROCUREMENT FOR 2011 AND 2012 (DOCKET NO. E-00000A-11-0113)

The Utilities Division Staff ("Staff") and its consultants Global Energy & Water Consulting, LLC and Evans Power Consulting, Inc. ("Consultants"), have completed the Assessment of the 2012 Integrated Resource Plans of the Arizona Electric Utilities ("Assessment") as required by Arizona Administrative Code R14-2-704A. The Assessment has been filed in the docket.

Background

The Assessment represents the professional opinion of Staff and its Consultants. The Assessment is not an evaluation of individual electric service providers' facilities or quality of service. The Assessment does not set Commission policy or approve of any plan or specific project(s). Rather, it assesses the adequacy of the Integrated Resource Plans ("IRP" or "IRPs") to meet the requirements of the Commission's Resource Planning and Procurement Rules. The IRPs have been prepared by the four Load-Serving Entities ("LSE" or "LSEs") as defined in the Rules.[1] The LSEs are Arizona Electric Power Cooperative ("AEPCO"), Arizona Public Service Company ("APS"), Tucson Electric Power Company ("TEP"), and UNS Electric, Inc. ("UNSE"). In addition, the second largest electric utility in Arizona, Salt River Project ("SRP"), which is not subject to these rules and regulations of the Commission and is not required to file an IRP, has voluntarily supplied certain information that is included in the Assessment.

An IRP is essentially the utility's plan to meet the future electric needs of its customers in a way that considers environmental impacts along with the concerns of customers, regulators, stockholders and other stakeholders. Within the IRP, the selection of ways to reduce, or shift electric usage (demand-side resources) are weighed in an equitable fashion against ways to increase the production of electricity (supply-side resources). The bottom line of an IRP is a schedule of demand-side and supply-side resources that will provide for the continued reliable delivery of electricity to customers in Arizona.

[1]An LSE is defined as "a public service corporation that provides electricity generation service and operates or owns, in whole or in part, a generating facility or facilities with capacity of at least 50 megawatts combined." A.A.C. R14-2-701(26).

The Commission's rules include certain filing requirements and require the Commission to determine whether each IRP complies with the requirements of the rules and is reasonable and in the public interest based on the information available to the Commission at the time, considering the following factors:

A. The total cost of electric energy services;

B. The degree to which the factors that affect demand, including demand management, have been taken into account;

C. The degree to which supply alternatives, such as self-generation, have been taken into account;

D. Uncertainty in demand and supply analyses, forecasts, and plans, and whether plans are sufficiently flexible to enable the utility to respond to unforeseen changes in supply and demand factors;

E. The reliability of power supplies, including fuel diversity and non-cost considerations;

F. The reliability of the transmission grid;

G. The environmental impacts of resource choices and alternatives;

H. The degree to which the LSE considered all relevant resources, risks, and uncertainties;

I. The degree to which the LSE's plan for future resources is in the best interest of its customers;

J. The best combination of expected costs and associated risks for the LSE and its customers; and

K. The degree to which the LSE's resource plan allows for coordinated efforts with other LSEs.[2]

In addition, each IRP (other than AEPCO's) must meet the requirements of the Annual Renewable Energy Requirement, the Distributed Renewable Energy Requirement, and the Energy Efficiency Standard.

[2] A.A.C. R14-2-704(B).

The IRPs

AEPCO and APS filed 2012 IRPs on March 30, 2012. TEP and UNSE filed 2012 IRPs on April 2, 2012.

Staff held two workshops to gather stakeholder input. The first workshop was held on August 22, 2012, and the second on October 25, 2012. The comments and presentations submitted at the workshops, materials filed in the docket and with Staff, and subsequent correspondence have been reviewed and incorporated in the Assessment, where appropriate.

A total of six parties were granted intervenor status: the Arizona Competitive Power Alliance; Interwest Energy Alliance; the Solar Energy Industries Association; SolarReserve, LLC; the Southwest Energy Efficiency Project; and Western Resource Advocates.

Assessment Conclusions

Staff and the Consultants believe that the 2012 Integrated Resource Plans produced by APS, TEP and UNSE are reasonable and in the public interest, based upon the information available to the Staff at the time this report was prepared and the factors set out in A.A.C. R14-2-704(B). While Staff believes the IRPs of APS, TEP and UNSE meet the requirements of the Commission's IRP rules, the following issues have been identified concerning the IRPs of APS, TEP and UNSE:

A. APS, TEP and UNSE

1. Conversion of Coal Plants to Natural Gas – None of the LSEs considered the possible conversion of existing coal generating plants to natural gas. This is a potentially viable option that would reduce the costs of emissions compliance and possibly bring long-term savings to the ratepayers.

2. Consideration of Jointly Developed Generation – Although the Palo Verde Nuclear Generating Station and Four Corners generating plants, among others, were developed through joint efforts of a number of electric utilities, the LSEs of Arizona (other than UNSE) did not seriously consider the joint development of new generating plants in their 2012 IRPs. Economies of scale could produce cost savings that would benefit all. For example, large solar facilities, energy storage projects, and new nuclear generation may become more feasible under the assumption that construction and operating costs would be shared among the developers.

3. Reliance on Future Short-Term Market Purchases – All three LSEs include future short-term market purchases throughout the 2012 IRPs. The cost and availability of such purchases are subject to a wide array of influences that are difficult, if not impossible, to predict. For example, if a large number of older

coal-fired generating plants are retired in the western region, the availability of such purchases will decline dramatically, and the cost of such purchases will increase significantly. Reliance on short-term market purchases in a long-term plan is difficult, if not impossible, to justify. Instead, beyond a five-year horizon, the LSEs should only include additional demand-side management programs, additional supply-side resources, and long-term purchased power.

4. Failure to Consider all Resource Options – None of the three LSEs considered all reasonable resources in the development of the 2012 IRPs. For example, APS did not consider all potential conventional energy storage facilities while TEP and UNSE failed to consider solar generators with storage capabilities.

5. Wind and Solar Integration Costs – Other than APS, the LSEs rely on wind and solar integration costs that are not specific to the entities' service territories and the entities' existing level of wind and solar facilities. TEP and UNSE should develop wind and solar integration costs that reflect the conditions within the TEP and UNSE systems.

B. APS

1. Manual Selection of Resources - APS used a manual process to select the "best" mix of resources for each IRP that was considered. This is not the industry-accepted practice, could possibly result in the selection of a resource mix that is not the best possible mix, and limits the utility's ability to fully evaluate a wide range of potential IRPs.

2. No Load Growth Sensitivity – APS failed to develop alternative IRPs that reflected higher than expected load growth or lower than expected load growth. This is a generally accepted requirement for the development of an IRP, and provides insight into what actions would be required, should load growth increase faster or slower than predicted.

C. UNSE

1. Energy Efficiency Standard – The UNSE final selected IRP does not meet the Commission's Energy Efficiency ("EE") Standard. However, UNSE has committed to meeting the EE Standard in the implementation of the IRP.

2. No Load Growth Sensitivity – UNSE also failed to develop alternative IRPs that reflected higher than expected load growth or lower than expected load growth.

D. AEPCO

1. Staff commends AEPCO for its efforts in providing information concerning its IRP and for its cooperative attitude, and notes that AEPCO is in a special situation regarding its member cooperatives. However, the AEPCO 2012 IRP does not satisfy the requirements of the Commission's IRP rules. For example, the Commission's rules require that the load-serving entity file an IRP that "selects a portfolio of resources based upon comprehensive consideration of a wide range of supply- and demand-side options". AEPCO considered (and selected) only short-term market purchases as a potential resource to meet future needs. AEPCO also failed to provide a calculation of the benefits of generation using renewable energy resources, an analysis of integration costs for intermittent resources, or analyses to identify risks and uncertainties in the availability of sources of power.

Recommendations

Staff notes that the 2012 Integrated Resource Plans are the first plans to be prepared and submitted under the Resource Planning and Procurement Rules. In this context, Staff believes it is as important to provide guidance and set expectations for future IRPs to the LSEs, as it is to critique the IRPs purely on whether they do or do not meet the submittal criteria contained in the Rules. Therefore, Staff is proposing several recommendations which Staff believes will enhance and improve future IRP submittals by the LSEs.

Staff recommends that the Commission acknowledge the 2012 IRPs filed by APS, TEP and UNSE, and further, that the Commission recommend that APS, TEP and UNSE address the issues described above in their 2014 IRP filings.

Staff further recommends that TEP include a coal fleet retirement scenario in its 2014 IRP.

Staff further recommends that the Commission not acknowledge the 2012 IRP filed by AEPCO, due to the noted filing deficiencies.

Staff notes that AEPCO is unique among the LSEs covered by the IRP Rules since all of its energy sales are at the wholesale level and it serves no retail load. Therefore, AEPCO serves no demand-side role in the IRP process. In addition, AEPCO's wholesale, supply-only role has shrunken dramatically since 2001 with the conversion of its three largest, most rapidly growing members to partial-requirements status. With the conversion of these members to partial-requirements status, AEPCO no longer has responsibility for growth planning or resource acquisition for these members. Consequently, Staff recommends that the Commission acknowledge AEPCO's unique situation by requiring AEPCO to continue in the IRP process but without the necessity of having its future IRPs acknowledged by the Commission.

Staff further recommends that AEPCO correct the noted deficiencies in future IRP filings.

Staff further recommends that AEPCO include an examination of the potential load growth attributes of its partial requirements customers when preparing its 2014 and all subsequent IRPs.

Steven M. Olea
Director
Utilities Division

SMO:RBL:lhm\MAS

Originator: Rick Lloyd

BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman
BOB STUMP
Commissioner
SANDRA D. KENNEDY
Commissioner
PAUL NEWMAN
Commissioner
BRENDA BURNS
Commissioner

IN THE MATTER OF RESOURCE PLANNING AND PROCUREMENT FOR 2011 AND 2012	DOCKET NO. E-00000A-11-0113 DECISION NO. _____ ORDER

Open Meeting
To Be Determined
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. The Utilities Division Staff ("Staff") and its consultants Global Energy & Water Consulting, LLC and Evans Power Consulting, Inc. ("Consultants"), have completed the Assessment of the 2012 Integrated Resource Plans of the Arizona Electric Utilities ("Assessment") as required by Arizona Administrative Code ("A.A.C.") R14-2-704A. The Assessment has been filed in the docket. Background

2. The Assessment represents the professional opinion of Staff and its Consultants. The Assessment is not an evaluation of individual electric service providers' facilities or quality of service. The Assessment does not set Commission policy or approve of any plan or specific project(s). Rather, it assesses the adequacy of the Integrated Resource Plans ("IRP" or "IRPs") to meet the requirements of the Commission's Resource Planning and Procurement Rules. The IRPs

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have been prepared by the four Load-Serving Entities ("LSE" or "LSEs") as defined in the Rules.[1] The LSEs are Arizona Electric Power Cooperative ("AEPCO"), Arizona Public Service Company ("APS"), Tucson Electric Power Company ("TEP"), and UNS Electric, Inc. ("UNSE"). In addition, the second largest electric utility in Arizona, Salt River Project ("SRP"), which is not subject to these rules and regulations of the Commission and is not required to file an IRP, has voluntarily supplied certain information that is included in the Assessment.

3. An IRP is essentially the utility's plan to meet the future electric needs of its customers in a way that considers environmental impacts along with the concerns of customers, regulators, stockholders and other stakeholders. Within the IRP, the selection of ways to reduce, or shift electric usage (demand-side resources) are weighed in an equitable fashion against ways to increase the production of electricity (supply-side resources) . The bottom line of an IRP is a schedule of demand-side and supply-side resources that will provide for the continued reliable delivery of electricity to customers in Arizona.

4. The Commission's rules include certain filing requirements and require the Commission to determine whether each IRP complies with the requirements of the rules and is reasonable and in the public interest based on the information available to the Commission at the time, considering the following factors:

A. The total cost of electric energy services;

B. The degree to which the factors that affect demand, including demand management, have been taken into account;

C. The degree to which supply alternatives, such as self-generation, have been taken into account;

D. Uncertainty in demand and supply analyses, forecasts, and plans, and whether plans are sufficiently flexible to enable the utility to respond to unforeseen changes in supply and demand factors;

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F. The reliability of the transmission grid;

G. The environmental impacts of resource choices and alternatives;

H. The degree to which the LSE considered all relevant resources, risks, and uncertainties;

I. The degree to which the LSE's plan for future resources is in the best interest of its customers;

J. The best combination of expected costs and associated risks for the LSE and its customers; and

K. The degree to which the LSE's resource plan allows for coordinated efforts with other LSEs. [2]

5. In addition, each IRP (other than AEPCO's) must meet the requirements of the Annual Renewable Energy Requirement, the Distributed Renewable Energy Requirement, and the Energy Efficiency Standard.

The IRPs

6. AEPCO and APS filed 2012 IRPs on March 30, 2012. TEP and UNSE filed 2012 IRPs on April 2, 2012.

7. Staff held two workshops to gather stakeholder input. The first workshop was held on August 22, 2012, and the second on October 25, 2012. The comments and presentations submitted at the workshops, materials filed in the docket and with Staff, and subsequent correspondence have been reviewed and incorporated in the Assessment, where appropriate.

8. A total of six parties were granted intervenor status: the Arizona Competitive Power Alliance; Interwest Energy Alliance; the Solar Energy Industries Association; SolarReserve, LLC; the Southwest Energy Efficiency Project; and Western Resource Advocates.

Assessment Conclusions

9. Staff and the Consultants believe that the 2012 Integrated Resource Plans produced by APS, TEP and UNSE are reasonable and in the public interest, based upon the information

[2] A.A.C. R14-2-704(B).

available to the Staff at the time this report was prepared and the factors set out in A.A.C. 14-2-704(B). While Staff believes the IRPs of APS, TEP and UNSE meet the requirements of the Commission's IRP rules, the following issues have been identified concerning the IRPs of APS, TEP and UNSE:

a. APS, TEP and UNSE

i. Conversion of Coal Plants to Natural Gas – None of the LSEs considered the possible conversion of existing coal generating plants to natural gas. This is a potentially viable option that would reduce the costs of emissions compliance and possibly bring long-term savings to the ratepayers.

ii. Consideration of Jointly Developed Generation – Although the Palo Verde Nuclear Generating Station and Four Corners generating plants, among others, were developed through joint efforts of a number of electric utilities, the LSEs of Arizona (other than UNSE) did not seriously consider the joint development of new generating plants in their 2012 IRPs. Economies of scale could produce cost savings that would benefit all. For example, large solar facilities, energy storage projects, and new nuclear generation may become more feasible under the assumption that construction and operating costs would be shared among the developers.

iii. Reliance on Future Short-Term Market Purchases – All three LSEs include future short-term market purchases throughout the 2012 IRPs. The cost and availability of such purchases are subject to a wide array of influences that are difficult, if not impossible, to predict. For example, if a large number of older coal-fired generating plants are retired in the western region, the availability of such purchases will decline dramatically, and the cost of such purchases will increase significantly. Reliance on short-term market purchases in a long-term plan is difficult, if not impossible, to justify. Instead, beyond a five-year horizon, the LSEs should only include additional demand-side management programs, additional supply-side resources, and long-term purchased power.

iv. Failure to Consider all Resource Options – None of the three LSEs considered all reasonable resources in the development of the 2012 IRPs. For example, APS did not consider all potential conventional energy storage facilities while TEP and UNSE failed to consider solar generators with storage capabilities.

v. Wind and Solar Integration Costs – Other than APS, the LSEs rely on wind and solar integration costs that are not specific to the entities' service territories and the entities' existing level of wind and solar facilities. TEP and UNSE should develop wind and solar integration costs that reflect the conditions within the TEP and UNSE systems.

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b. APS

i. Manual Selection of Resources - APS used a manual process to select the "best" mix of resources for each IRP that was considered. This is not the industry-accepted practice, could possibly result in the selection of a resource mix that is not the best possible mix, and limits the utility's ability to fully evaluate a wide range of potential IRPs.

ii. No Load Growth Sensitivity – APS failed to develop alternative IRPs that reflected higher than expected load growth or lower than expected load growth. This is a generally accepted requirement for the development of an IRP, and provides insight into what actions would be required, should load growth increase faster or slower than predicted.

c. UNSE

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ii. No Load Growth Sensitivity – UNSE also failed to develop alternative IRPs that reflected higher than expected load growth or lower than expected load growth.

d. AEPCO

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Recommendations

10. Staff notes that the 2012 Integrated Resource Plans are the first plans to be prepared and submitted under the Resource Planning and Procurement Rules. In this context, Staff believes it is as important to provide guidance and set expectations for future IRPs to the LSEs, as it is to critique the IRPs purely on whether they do or do not meet the submittal criteria contained in the Rules. Therefore, Staff has proposed several recommendations which Staff believes will enhance and improve future IRP submittals by the LSEs.

11. Staff has recommended that the Commission acknowledge the 2012 IRPs filed by APS, TEP and UNSE, and further, that the Commission recommend that APS, TEP and UNSE address the issues described above in their 2014 IRP filings.

12. Staff has further recommended that TEP include a coal fleet retirement scenario in its 2014 IRP.

13. Staff has further recommended that the Commission not acknowledge the 2012 IRP filed by AEPCO, due to the noted filing deficiencies.

14. Staff notes that AEPCO is unique among the LSEs covered by the IRP Rules since all of its energy sales are at the wholesale level and it serves no retail load. Therefore, AEPCO serves no demand-side role in the IRP process. In addition, AEPCO's wholesale, supply-only role has shrunken dramatically since 2001 with the conversion of its three largest, most rapidly growing members to partial-requirements status. With the conversion of these members to partial-requirements status, AEPCO no longer has responsibility for growth planning or resource acquisition for these members. Consequently, Staff has recommended that the Commission acknowledge AEPCO's unique situation by requiring AEPCO to continue in the IRP process but without the necessity of having its future IRPs acknowledged by the Commission.

15. Staff has further recommended that AEPCO correct the noted deficiencies in future IRP filings.

16. Staff has further recommended that AEPCO include an examination of the potential load growth attributes of its partial requirements customers when preparing its 2014 and all subsequent IRPs.

CONCLUSIONS OF LAW

1. AEPCO, APS, TEP and UNSE are Arizona public service corporations within the meaning of Article XV, Section 2, of the Arizona Constitution.

2. The Commission has jurisdiction over AEPCO, APS, TEP and UNSE over the matters raised herein.

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3. The Commission, having reviewed the 2012 Integrated Resource Plans and Staff's Memorandum dated December 21, 2012, concludes that it is in the public interest to adopt Staff's recommendations as discussed herein.

ORDER

IT IS THEREFORE ORDERED that the 2012 Integrated Resource Plans of Arizona Public Service Company, Tucson Electric Power Company, and UNS Electric, Inc. are hereby acknowledged pursuant to A.A.C. R14-2-704(B).

IT IS FURTHER ORDERED that Arizona Public Service Company, Tucson Electric Power Company, and UNS Electric, Inc. shall address the issues identified in the 2012 Integrated Resource Planning Assessment and incorporate the appropriate responses in the 2014 Integrated Resource Plans.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall include a coal fleet retirement scenario in its 2014 Integrated Resource Plan.

IT IS FURTHER ORDERED that the 2012 Integrated Resource Plan of Arizona Electric Power Cooperative is hereby not acknowledged pursuant to A.A.C. R14-2-704(B) due to the noted filing deficiencies. IT IS FURTHER ORDERED that Arizona Electric Power Cooperative shall continue in the IRP process but without the necessity of having its future IRPs acknowledged by the Commission.

IT IS FURTHER ORDERED that Arizona Electric Power Cooperative correct the noted deficiencies in future IRP filings.

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IT IS FURTHER ORDERED that Arizona Electric Power Cooperative shall include an examination of the potential load growth attributes of its partial requirements customers when preparing its 2014 and all subsequent Integrated Resource Plans.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this _____day of _____, 2013.

_____
ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

SMO:RBL:lhm\MAS

SERVICE LIST FOR: Resource Planning and Procurement for 2011 and 2012
DOCKET NO. E-00000A-11-0113

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